MINISTRY OF ENERGY, MINES AND

PETROLEUM RESOURCES

ENERGY RESOURCES DIVISION

BRITISH COLUMBIA NATURAL GAS REMOVAL POLICY

A POLICY PAPER

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Summary of Policy Initiatives

The Ministry will implement the following natural gas removal and related initiatives:

(1) Elimination of the Mandatory Surplus Test.

(2) Evaluation, audit and monitoring of committed and available lands and reserves, production, deliverability and markets to which reserves are dedicated.

(3) Elimination of the Border Price Test.

(4) Implementation of the Natural Gas Market Information System and the exercise of British Columbia Utilities Commission prudency of purchase reviews.

(5) Institution of a Complaints Procedure for domestic gas consumers.

(6) Flexible reserves dedication with a minimum reserve requirement of 50 to 100 percent established reserves.

(7) Industry access to the Ministry's inventory of committed and available lands and established reserves.

(8) Parallel term in both export and domestic markets. The maximum term is currently 15 years but terms in excess of 15 years may be permitted in unique circumstances.

(9) Monthly reporting of gas removal volumes and prices at the removal point (border) and the plant inlet. Monthly reporting will terminate upon implementation of the Natural Gas Market Information System.

(10) Institution of a Minimum Price for Royalty purposes.

(11) No reserve dedications for short-term Energy Removal Certificates (ERC). However, reporting of well location and field name will be required.

(12) A levy on all gas sales to recover the cost of ERC administration and domestic supply protection.

To avoid market bias, the British Columbia Utilities Commission will be modifying its Rules Respecting Energy Supply Contracts to ensure that British Columbia gas customers' access to natural gas is equal to that of export customers.

BRITISH COLUMBIA NATURAL GAS REMOVAL POLICY

1. INTRODUCTION

1.1 BRITISH COLUMBIA NATURAL GAS INDUSTRY

1.1.1 Industry Activity

British Columbia is experiencing an upsurge in natural gas exploration and development. This activity is led by recent provincial policy initiatives such as the simplified gas royalty regime and market deregulation. It is also driven by market opportunities in British Columbia, the United States and eastern Canada.

Industry activity during 1990 in northeast British Columbia is promising to be higher than at any time since 1980. A total of 166 wells have been drilled in the first three months of 1990. This represents a 66 percent increase over last year's results for the same period. As much as 90 percent of drilling may be directed at gas objectives. The trend should continue, given high levels of geophysical activity, buoyant land sales and heavy utilization of the Fort St. John core examination facility. Total industry expenditures in British Columbia are expected to reach the $1 billion mark for the year.

Areas of current development activity include the 100 well Ring shallow gas field (Bluesky-Gething and Montney gas), the Helmet-July Lake area (Jean Marie gas), the Hossitl area (Slave Point gas) and the Deep Basin (multi-zone Cretaceous gas). Exploration is also continuing at Sukunka, Boulder and other Foothills structures, along the Belloy/Kiskatinaw trend, and the Klua embayment. Drilling is currently planned for the Fraser Valley and the Flathead Basin of southeast British Columbia.

1.1.2 Conventional Supplies

British Columbia has a secure, long-term supply of natural gas (210 billion cubic meters of established marketable gas as of December 31, 1988). At the current rate of production, this equates to a reserve life index (reserve-production ratio) of 27 years. Estimates of the ultimate marketable gas reserves for northeast British Columbia range from 1100 billion cubic meters to 1400 billion cubic meters. In addition the Geological Survey of Canada estimates British Columbia's potential undiscovered marketable reserves in the central, northern interior and offshore basins to be up to 850 billion cubic meters.

British Columbia's geological potential is relatively undelineated. To date, only 7,000 wells have been drilled in the northeast region of British Columbia. Less than 100 wells have been drilled outside the Northeastern Basin. The British Columbia portion of the Western Canada Basin has a density of only 1 well per 20 square kilometers compared to 4.4 wells per 20 square kilometers in Alberta and 40 wells per 20 square kilometers in Texas.

1.1.3 Markets

The decade ahead looks very promising for natural gas sales. Natural gas is becoming "the fuel of choice" as the North American public becomes increasingly concerned about the environment, and policy moves in the direction of clean air legislation.

The outlook for exports of British Columbia gas is bright. New reserves being developed along the British Columbia/Alberta border have access to the NOVA Corporation of Alberta (NOVA) transmission system. This enables British Columbia gas to compete in new markets such as eastern Canada and the northeast and midwest United States. Proposed pipeline capacity expansions to California will provide access to that market for British Columbia gas.

Natural gas markets in the United States and eastern Canada have opened up new supply areas which likely would not warrant development if market opportunities were confined to serving domestic demand. Domestic markets benefit directly from reserve additions in excess of export requirements. Throughout the 1980s when British Columbia's gas exports were declining, established reserves were also in decline. Not until 1989, when export volumes recovered to a level approaching the record levels of the 1970s, did this trend reverse and gas reserves additions exceed production. Clearly, security of supply for the domestic market goes hand-in-hand with buoyant gas export markets.

The British Columbia Government is committed to continuing the deregulation of the provincial natural gas industry. It is committed to accomplishing the objectives of the October 1985, "Agreement Among the Governments of Canada, Alberta, British Columbia and Saskatchewan on Natural Gas Markets and Prices" (the 1985 Agreement), especially to enhance market access to Canadian natural gas producers and consumers, and to foster competition in both domestic and export markets.

The Government is further committed to ensuring security of supply to the domestic core market at fair prices, and to providing an attractive economic climate for industrial growth in the province. The thrust of the British Columbia natural gas policy is to let the market work. A market-

driven gas industry can be an efficient, self-adjusting system that performs a vital role in achieving sustainable development in the province, and in ensuring fair market prices and security of supply for all natural gas consumers in British Columbia. The Government's new natural gas removal policy is made in this context.

1.2 BACKGROUND ON THE NATURAL GAS REMOVAL POLICY REVIEW

In April 1989, the Ministry of Energy, Mines and Petroleum Resources (the Ministry) initiated a review of the information requirements, administrative procedures, criteria for assessment and underlying policy of its long-term energy removal process.[1]

A number of issues made this review necessary including the signing of the Free Trade Agreement, further deregulation of the natural gas industry and the industry's renewed interest in long-term removals. Of particular concern to the Ministry was the implementation of the Natural Gas Core Market Policy as announced on July 5, 1988, and the corresponding British Columbia Utilities Commission's (BCUC) Rules Respecting Energy Supply Contracts issued August 19, 1988.

The Ministry engaged consultants to review the impacts of the above issues on British Columbia's existing energy removal procedures and policy and to evaluate alternatives, taking into consideration changing natural gas markets and regulatory environments.[2] Certain parties and organizations in the natural gas industry were invited to give their views.

A report from the consultants was submitted in October 1989. It generated considerable discussion within the Ministry both at the staff and management levels. Two important policy areas emerged from these discussions: one pertains to pricing and the other to reserve dedication.

The Ministry examined the various policy options and procedures in the context of the following objectives:

(1) to promote sustainable development of the provincial natural gas industry;

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1 Province of British Columbia, Ministry of Energy, Mines and Petroleum Resources, INFORMATION LETTER E89-05, April 26, 1989.

2 Province of British Columbia, Ministry of Energy, Mines and Petroleum Resources, INFORMATION LETTER E89-05, May 30, 1989.

(2) to ensure security of supply for the domestic and export markets;

(3) to ensure fair market pricing in the domestic and export markets;

(4) to ensure timely processing of removal certificate applications; and

(5) to maintain effective audit and Crown revenue protection.

In this document, the Ministry puts forward a package of policy initiatives and procedures for the removal of British Columbia natural gas. These initiatives are consistent with British Columbia's commitment to deregulation.

The Ministry believes these initiatives will increase competition in the marketing of natural gas and encourage innovative ways of developing new supplies. The Ministry will be able to respond, in a timely manner, to the large increase in industry applications for natural gas removal certificates and reviews of domestic long-term supply contracts.

2. BRITISH COLUMBIA'S NATURAL GAS REMOVAL POLICY AND PROCEDURES

2.1 LEGAL FRAMEWORK

The legal framework for the removal of natural gas from British Columbia is established by Part 2 of the Utilities Commission Act, S.B.C. 1980, c. 60, as amended (the Act).

Sections 22 through 25 of the Act provide that an "energy resource" may not be removed from British Columbia except in accordance with an Energy Removal Certificate (ERC). An ERC must be obtained from the Minister or, where the Minister has referred the matter to the BCUC for a hearing, from the Lieutenant-Governor-in-Council on the recommendation of the BCUC. The only two exceptions are energy removals authorized before the legislation was passed and energy removals that are exempted by the Energy Resource Removal Exemptions Regulation, B.C. Reg. 385/80, as amended.

Further, in the event of an emergency, section 6.1 of the Ministry of Energy, Mines and Petroleum Resources Act, S.B.C. 1979, c. 270, as amended, gives the Minister the authority to control the use and supply of energy resources in British Columbia. The exercise of this authority in the event of an emergency will be consistent with the Free Trade Agreement and the terms of the ERC.

2.2 ENERGY REMOVAL POLICY

2.2.1 Mandatory Surplus Test

Under the current Mandatory Surplus Test, British Columbia permits only the removal of natural gas which can be shown to be surplus to the province's current and forecast requirements. The Mandatory Surplus Test compares the proposed total removal volumes with available reserves net of reserves committed to domestic requirements and authorized exports. The surplus is defined as follows:

Surplus = Established Reserves Less 15 times Core Market Requirements Less Non-Core Market Firm Requirements Less Remaining Firm Export Commitments

The "core market" is defined as residential, commercial, institutional and small industrial consumers who have no alternative fuel burning capability and who are not engaged in direct purchases under Section 85(3) of the Utilities Commission Act.

British Columbia adopted the Mandatory Surplus Test in July 1987, as a compromise between two highly polarized positions: local distribution utilities had argued for retention of a surplus test while producers, exporters and transmission companies had favoured its elimination because, in their view, contracts provide the best means of supply protection.

The same polarized views continue to exist today despite the National Energy Board's (NEB) July 1987, decision[3] to eliminate the formula approach to surplus determination in considering export applications and the introduction of the British Columbia Core Market Policy and the corresponding BCUC Rules Respecting Energy Supply Contracts.

The NEB set a regulatory precedent in the elimination of its formulaic surplus test, a test which had mandated excess reserves. The NEB found its test inappropriate and inconsistent with market-oriented pricing.

The BCUC Rules Respecting Energy Supply Contracts require that:

- domestic utilities provide a rolling 10 to 15 year supply for their core market;
- a diversity of supply;

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3 National Energy Board, Reasons for Decision in the Matter of Review of Natural Gas Surplus Determination Procedures, July 1987.

- third party evaluations of initial reserves and deliverability; and

- prudent combination of terms, conditions and price.

Domestic utilities must submit their gas supply contracts to the BCUC for approval. Arrangements made by direct purchasers must also be reviewed by the BCUC. Until the local domestic utilities complete their initial round of new contracts for the November 1, 1991 contract year, application of the British Columbia Core Market Policy remains virtually untested.

The Mandatory Surplus Test does not provide effective protection of domestic core market customers because it includes uneconomic reserves.

A utility supply contract portfolio, backed by economic reserves will be a more effective means of protecting domestic core market customers. The 10 to 15 year rolling supply requirement of the BCUC Rules parallels the 15 year core market component of the Mandatory Surplus Test.

In the course of administering the energy removal process, the Ministry has become aware of the limited usefulness of the calculated surplus at the provincial level. Since the surplus is calculated at the provincial level, it includes a large number of gas pools. ERCs, on the other hand, are supported by specific pools. A mandatory province-wide surplus also entails an inventory of uncommitted gas with an associated opportunity cost.

If security of supply for the domestic and export markets is to be ensured, a more detailed analysis of individual pools is needed, including consideration of their ownership and contractual obligations. The only value of the Mandatory Surplus Test is in the estimate of the provincial surplus itself.

The Ministry, therefore, will eliminate the Mandatory Surplus Test once the core market is adequately protected by a portfolio of gas supply contracts. The Ministry intends to replace the test with a process of evaluation, audit, and monitoring of committed and available lands and reserves, production and deliverability from connected reserves and the markets to which reserves are dedicated. The Ministry believes these measures are the only way to provide effective supply protection for the domestic and export markets.

2.2.2 Border Price Test

Pursuant to the 1985 Agreement, British Columbia introduced a Border Price Test which does not permit the removal of natural gas from the province at a price less than the price charged to British Columbians in an adjacent zone for similar type of service.

The Border Price Test is based on comparable types of sales in the domestic market. However, the implementation of the test on a comparable sales basis has been difficult, as existing sales arrangements in the export and domestic markets are not directly comparable. Furthermore, the gas composition for domestic sales typically contains more acid (CO_2 and H_2S) and requires higher processing charges than the gas removed from British Columbia. In addition, domestic sales generally have lower load factors which result in higher transportation costs than otherwise similar sales to non-British Columbia markets. The combined effect of higher processing and transportation costs for domestic sales results in a Border Price Test which may not be met by proposed removals with high load factors and low cost facilities.

Performing the price test at the plant inlet rather than at the border would only create the opposite problem. Removals of acid gas with high facilities costs would be unlikely to pass a Plant Inlet Price Test.

The floor price at the border exhibits variations during the year which are not attributable to the cost of gas. These fluctuations are caused by a changing mix of domestic customers and load factor. Hence, the Border Price Test may not be a true standard to which other prices are compared.

The Border Price Test is difficult to administer in a consistent manner. For example, sales at the border to a single buyer with multiple customers can successfully meet the test based on an average price even if the border prices of some of the individual customer sales would have fallen below the floor.

Because of its inherent inequities and practical difficulties, the Ministry will abolish the Border Price Test. In its place, the Ministry will implement a Natural Gas Market Monitoring System wherein monthly domestic prices will be compared to export prices and prices of gas sold to Canadian customers outside of British Columbia.

The Ministry intends to enhance the dissemination of market information by disaggregating the sales to various market regions, and within each region, to various sales and customer categories where possible. The confidentiality of company data will be maintained. This action is consistent

with implementing a market oriented system because the greater the visibility of prices, the better the market will work.

The Ministry will also provide the BCUC with actual monthly gas prices and volumes at even lower levels of aggregation for the BCUC's use in its prudency of purchase reviews. Again, the confidentiality of company data will be maintained. Utilities must obtain approval from the BCUC for all costs of gas purchased for the domestic core market. If certain gas purchases are found imprudent, e.g., the prices, volumes and other contractual terms of gas purchased by a utility are not competitive with those purchased by other buyers for markets outside British Columbia, then the BCUC has the authority to deny the passthrough of such costs to consumers. The Ministry believes that such reviews will ensure that British Columbians have access to secure supplies of natural gas at fair market prices.

The Ministry will also institute a Complaints Procedure. The objective is to ensure that British Columbia utilities and direct purchasers have equal opportunity to contract gas on terms and conditions similar to those of proposed exports.

If, upon review, a complaint is found to be valid, the Ministry may deny the application or defer issuance of an ERC until the complaint is resolved.

2.2.3 Reserves Requirement

At present, long-term energy removal applications must be fully supported by established reserves. Established reserves are defined as proven reserves plus probable reserves discounted for risk. However, in the past the Ministry has issued conditional ERCs based on development contracts, subject to the applicant establishing the full reserves requirements prior to the export of any gas.

A conditional ERC may be granted where the established reserves are less than 100 percent of the applied for volume but where dedicated lands are considered by the Ministry to have sufficient potential to provide the necessary reserves requirement within a reasonable time frame. The ERC will be conditioned to require the balance of reserves to be established within a specified period. Failure to satisfy the condition could result in a reduction in the ERC's term and/or total volume.

There are advantages to development contracts. They can stimulate land acquisition and exploratory drilling. Capital is not tied up in premature development of reserves and therefore can be more efficiently used by industry. As

a consequence, British Columbia producers will be more competitive in the marketplace.

The Ministry recognizes that buyers face greater risks with development contracts than with contracts fully backed by established reserves. However, if the buyers and the producers are prepared to take these risks, the Ministry would accept such supply arrangements subject to certain conditions.

The Ministry, therefore, will implement a policy of flexible reserve dedication with a minimum reserve requirement of 50 to 100 percent of the applied for volume to be supported by established reserves at the time of application. The application must also be supported by a prudent program for establishing the balance of the reserves. The volume of established reserves and land commitment required for an ERC approval will vary depending on the term of the ERC, quality of dedicated lands the applicant's exploration program, and other relevant factors.

For example, a three-year term ERC would require the term volume fully supported by established reserves upon application. In contrast, a 15-year term ERC may require less than 100 percent established reserves dedication plus satisfactory levels of land commitment and detailed exploration program on the committed lands.

Applications with less than 100 percent established reserves dedication may be granted conditional ERCs subject to reserves being established by a specified time. In the event that an ERC-holder is unable to meet the reserves condition, the term of the ERC or the term volume would be adjusted appropriately.

The Ministry believes that the domestic market would benefit from development contracts. In particular, there would be access to new supply areas which would not likely be developed without the export market demand. **To avoid market bias, the same policy of flexible reserves dedication should apply to the domestic market.** The BCUC will be modifying its Rules Respecting Energy Supply Contracts to achieve this.

2.2.4 Other Reserves Information Requirements

The Ministry believes that greater access to information on available reserves and lands will foster market competition and security of supply for both export and domestic markets.

The Ministry will require the ERC applicants to provide information on their total established reserves, reserves dedicated to each sale and the markets to which all their British Columbia natural gas is committed. This will allow

the Province to manage British Columbia's gas reserves efficiently.

In return, the Ministry will give industry access to the Ministry's inventory of committed and available lands and established reserves.

2.2.5 Term

The present maximum length of an ERC term is 15 years. It parallels the contract term requirement for utilities in the domestic market as articulated in the BCUC Rules Respecting Energy Supply Contracts.

The term of an ERC must be consistent with the lesser of the term of the gas sales or that of the gas supply contracts supporting the ERC.

The rigid implementation of the maximum term policy has been criticized in circumstances where new transportation facilities could only be put in place under a longer term or where customer supply requirements exceed the 15 year maximum.

The maximum term for a long-term ERC will be 15 years unless the Ministry is persuaded that a longer term is required in order to make the sales transactions or pipeline project financially viable. In the event that contract terms greater than 15 years are approved in the domestic market, the Ministry will consider approving the same term for the export market.

Although the Ministry is not encouraging removals in excess of 15 years, applicants with unique cases are requested to discuss the matter with the Ministry prior to submitting an ERC application.

2.2.6 Supply, Sales and Transportation Contracts

The information requirements for an ERC or modification to an ERC are prescribed in B.C. Regulation 389/80. Gas supply contracts with producers must be submitted with the application to ensure that the supporting reserves have not and will not be committed to other markets.

Currently, gas sales contracts are reviewed by the Ministry to ensure that the contract price meets the Border Price Test. After the elimination of the Border Price Test, gas sale contracts will be reviewed by the Ministry to ensure that the removals are in the public interest.

Transportation contracts within British Columbia and, where applicable, with NOVA must be filed at the time of application or, where a conditional ERC has been issued,

prior to the commencement of the term. The requirement for transportation contracts ensures that the shippers have sufficient capacity to move their daily gas volume commitments.

The requirement to file the full supply contract has been questioned in the case of development contracts containing innovative pricing provisions and terms and conditions.

Therefore, as a rule, the Ministry will require that the full length supply, sales and transportation contracts be filed with the long-term ERC application. However, if the applicant is able to provide justification, an abridged version of the supply contract may be accepted if it meets the Ministry's legal and information requirements with respect to the reserves and dedicated lands supporting the application.

2.2.7 Monthly Reporting

The actual prices and volumes of natural gas removed at the border are reported by the ERC-holder each month (see Schedule 1, Appendix 7 for the form).

The information which ERC holders are required to report monthly reflects the policy objectives of the Ministry. Enhanced dissemination of market information will better enable British Columbia utilities to negotiate prudent contracts. Given the objective of relying more on free dissemination of market information as a means of enhancing competition in the export and domestic markets, the Ministry will monitor prices and volumes both at the removal point (the border) and at the plant inlet. The ERC holders' monthly reports must include the price at the border, cost of service for gathering, processing and transportation, and the calculated plant inlet netback price.

The filing of monthly reports will be terminated after the Ministry has implemented the Natural Gas Market Monitoring System which will track sales volumes and the border prices for all removals from British Columbia, prices delivered to the domestic customers, and plant inlet prices for all sales.

The monitoring system is part of the Ministry's overall plan to streamline the ERC process and to reduce the reporting burden on industry. The target implementation date for the monitoring system is November 1, 1990.

2.3 NATURAL GAS ENERGY REMOVAL CERTIFICATE GUIDELINES

To assist ERC applicants, the Ministry has prepared detailed procedures for both long-term removal (see Schedule 1) and short-term removal (see Schedule 2) applications. The

procedures identify the information requirements in greater detail and reflect the Ministry's policy initiatives on natural gas removals.

3. MINIMUM PRICE FOR ROYALTY PURPOSES

The Border Price Test has the effect of setting a floor price for gas removed from British Columbia. In eliminating the Border price Test, the Ministry will send a signal that it is prepared to allow natural gas removals at market negotiated prices. However, the Ministry must protect Crown royalties.

As a matter of policy, the Province will not participate in price discounting of its natural gas resource. **Therefore, the Ministry will set the minimum price for royalty purposes at 90 percent of the average market price (AMP) for all sales of British Columbia gas.** The British Columbia AMP will be based on the Plant Inlet Price and will be net of gathering, processing and transportation costs. The AMP will be a volume weighted average of all sales including domestic and export, firm and interruptible, and short-term and long-term. Sales below the minimum price will be permitted but the royalty payable to the Crown will be based on the minimum price.

The AMP for the coming production month will be posted by the Ministry one week before the first day of the production month. The AMP will be calculated as a three-month volume-weighted moving average of the:

a) actual AMP for the latest production month for which plant inlet price and volume data are complete; and
b) estimated AMPs for the following two months,

adjusted for seasonality and current price trends. The estimated AMPs will be based on actual data to the maximum extent possible. The average of the three AMPs will be adjusted for seasonality using the ratio of the previous year's monthly actual AMP to the average of the actual AMPs in the preceding three months (see Table 1 below for sample calculation). The projected AMP will be further adjusted to reflect current price trends in the export and domestic markets, if necessary.

Minimum pricing for royalty purposes will be implemented for the November 1990 production month. The first reporting month that incorporates the minimum price will be January 1991. The Border Price Test will terminate October 31, 1990.

Table 1

Sample Average Market Price (AMP) Calculation
(April 1990, $CDN/GJ)

January 1989 Actual AMP	1.10
February 1989 Actual AMP	1.05
March 1989 Actual AMP	1.00
April 1989 Actual AMP	0.95
January-March 1989 Average AMP	1.05
Seasonal Adjustment Factor	0.95/1.05=0.905
January 1990 Actual AMP	1.20
February 1990 Estimated AMP	1.15
March 1990 Estimated AMP	1.10
January-March 1990 Average AMP	1.15
April 1990 AMP (seasonally adjusted)	1.15*.905=1.04
April 1990 Minimum Price for Royalty	0.90*1.04=0.94

Notes: Calculation of averages assumes equal volumes in each month.

Prices are for illustrative purposes only.

4. SHORT-TERM ENERGY REMOVALS

An energy removal with a term of no more than two years is considered short-term in duration. **The Ministry will continue its current policy of not requiring reserves dedications for short-term ERCs.** To avoid market bias, the same policy should apply to the domestic market. The BCUC will be modifying its Rules Respecting Energy Supply Contracts to achieve this.

With respect to supply information, the Ministry will continue to require well location and field name. As with long-term removals, monthly reported removal volumes are not linked to producing wells. The Ministry is concerned that gas removals from British Columbia, which are predominantly short-term, could withdraw natural gas already committed to the long-term domestic or export market. The Ministry has not yet decided on how to monitor these short-term withdrawals. **Therefore, the Ministry is requesting gas producers and ERC holders to provide the Ministry with written suggestions for tracking these short-term withdrawals.**

5. COST RECOVERY

The Ministry's policy initiatives on natural gas removals reflect its commitment to secure supplies for all markets and to permit flexible reserves dedication in order to meet the diverse and changing contractual arrangements in the natural gas industry.

These commitments can be met with increased gathering, evaluation and monitoring of information from the export market through the ERC process and from the domestic market through the BCUC. Section 85.3 of the Utilities Commission Act authorizes the BCUC to require domestic utilities and industrial gas customers in British Columbia to submit supply contracts and supporting information for review. The intent of the BCUC review is to ensure secure supplies for all British Columbia customers and, in particular, long-term supplies of natural gas at competitive prices for core market customers. The Ministry will use its process of evaluation, audit and monitoring of natural gas production, volumes, deliverability, supply contracts and market prices to provide the BCUC with information and advice on the security and competitiveness of domestic supplies.

In order to maintain a province-wide natural gas resource data base, the Ministry, through the BCUC, will require the filing of information on core and non-core market contract volumes and supporting lands and reserves. The Ministry will evaluate all domestic supply contracts to ensure that reserves and land commitments for the domestic market are not committed to any other markets. The Ministry will also monitor domestic withdrawals from connected reserves through the data bases within the Ministry's Petroleum Royalty Management System to ensure that deliverability to the domestic market is maintained.

The large and growing natural gas export market in the United States and eastern Canada has been the impetus for the recent record breaking industry activity in British Columbia. The Ministry has received a significant number of industry requests for short-term and long-term gas removal certificates. Meeting these requests in a timely manner will require more resources than currently are in place within the Ministry. The Ministry's commitment to security of supply for the export and domestic markets, industry access to market and reserves information and flexible reserves dedication also cannot be met without additional resources and system support. The necessary additional resources have been granted to the Ministry on a cost recovery basis in its 1990/91 budget.

The Ministry will recover the full cost of implementing its gas removal and domestic supply protection policies by means of a producer levy on all sales of British Columbia natural gas. The legislative basis for the levy is contained in section 15(2)(c) of Bill 54-1989, Natural Gas Price Act. The relevant legislation

will be proclaimed prior to the implementation of the natural gas removal policy and procedures as discussed in this document.

The proposed restructured British Columbia Petroleum Corporation (BCPC) will be designated as the collector of the levy. The levy will be deductible for royalty purposes. The Ministry will bill the BCPC for the cost of ERC administration and domestic supply protection. **The administration of short-term and long-term ERCs will remain with the Ministry.**

6. COMMENTS

In order for industry and public concerns to be incorporated in the implementation of the new gas removal policy and procedures, interested parties are requested to submit written comments by July 31, 1990 to:

Mr. John Allan
Assistant Deputy Minister
Energy Resources Division
Ministry of Energy, Mines and
Petroleum Resources
Parliament Buildings
Victoria, British Columbia
V8V 1X4

For further information, contact Mr. Gordon Douglas, Executive Advisor at (604) 356-2139.

SCHEDULE 1

GUIDELINES FOR AN APPLICATION FOR THE LONG-TERM REMOVAL OF NATURAL GAS FROM THE PROVINCE OF BRITISH COLUMBIA

1.0 INTRODUCTION

An Energy Removal Certificate (ERC) is required before an energy resource can be removed from British Columbia (B.C.). These Guidelines provide information on the procedures to be followed to obtain an ERC for natural gas removals. The sections are organized as follows:

Section 2.0 Legislative Requirements
Section 3.0 Application Information Requirements
Section 4.0 Application Procedures, Review and Approval
Section 5.0 Reporting Requirements
Section 6.0 Ministry Contacts

2.0 LEGISLATIVE REQUIREMENTS

Part 2 of the Utilities Commission Act (the Act) provides the Minister of Energy, Mines and Petroleum Resources (the Minister) with the authority to issue ERCs, subject to conditions he considers to be in the public interest. Under Section 22 of the Act, an ERC is required before an energy resource can be removed from the Province. The person who owns the natural gas as it leaves the Province must apply for and obtain an ERC before removing natural gas.

Under Section 23, an application for an ERC or modification to an existing ERC, must be made to the Minister and contain the information prescribed in a proposed B.C. Regulation (the Regulation). See Appendix 1 for the draft Regulation and relevant sections of the Act.

Section 24 (1)(b) enables the Minister to issue an ERC, subject to conditions he considers to be in the public interest. The Minister may, under Section 24 (1)(c), refuse to issue an ERC.

A public hearing option exists under Sections 24 (1)(a), where the Minister may refer an application, or modification request, to the B.C. Utilities Commission (the Commission) for a public review using terms of reference issued by the Minister. If the public hearing option is used, the Lieutenant-Governor-in-Council (the Cabinet), upon receipt of the Commission's report and recommendations, may refuse to issue the ERC or may issue the ERC subject to public interest conditions.

3.0 APPLICATION INFORMATION REQUIREMENTS

The information contained in an application to remove natural gas from the Province should conform to the requirements specified in the Regulation.

APPLICANT

(i) **APPLICANT'S NAME, ADDRESS AND BUSINESS**

- The applicant must be the owner of the natural gas as it leaves the Province and a legitimate company involved in the natural gas industry, e.g., producer, aggregator or broker.

- The applicant must be signatory to the submitted sales contract and supply contract(s).

- The application must state the applicant's legal company name and current address with phone and fax numbers.

(ii) **NAME, TITLE AND ADDRESS OF CONTACT RESPECTING THE APPLICATION**

- The applicant's contact person must be identified by name, title and address with phone and fax numbers.

ENERGY REMOVAL DESCRIPTION

(i) **QUANTITY AND TYPE OF REMOVAL**

- The application must state that the removal is for natural gas and specify the maximum daily volume and total term volumes in gigajoules (GJ) and cubic metres. Appendix 2 contains conversion calculations.

- Requested removal volumes must be supported by sales contract volumes and, where applicable, by supply contract volumes. Only contracted volumes will be approved in an ERC.

- The application must specify that the sale is firm based on transportation arrangements and the sales contract. The expected load factor should be explicitly identified.

- Any removals of raw natural gas which require processing outside of British Columbia must specify raw and residual volumes. For example, for removals of raw natural gas at the British Columbia/Alberta border to an Alberta processing plant, the ERC-applicant must state the volumes of raw natural gas to be removed from British Columbia and the volumes of residue gas to be sold at the plant outlet.

(ii) **PERIOD (TERM)**

- The requested term must be equal to the lesser of the term of the sales contract and the supply contract(s), subject to a maximum of 15 years.

- Exceptions will be considered in unique circumstances.

(iii) **MARKET AND CUSTOMERS**

- The application must specify who the buyer of the natural gas is at the removal or delivery point.

- The application must also describe, by market region and type of end-user, who will ultimately consume the removed natural gas.

- Market regions are designated by Canadian provinces and United States regions as defined by the Federal/Provincial Monitoring Committee (see Appendix 3). If natural gas is going to more than one market region, the application should indicate the anticipated proportion of the maximum daily volume going to each market.

(iv) **PRICE**

- For monitoring purposes, the application must specify the sales contract price in $CDN/GJ and $US/MMbtu at the British Columbia removal point, (see Appendix 4) and the pricing formula used to arrive at the contract price.

- The application must also provide information on the producer netback price at the plant inlet in $CDN/GJ.

(v) **Acquisition Order**

- An acquisition order (AO) is required before natural gas can be removed from British Columbia. The AO is issued by the British Columbia Petroleum Corporation (BCPC) to the producer at the point of first sale.

(vi) **MEANS OF DELIVERY**

- The application must specify how the natural gas will be delivered to the removal point and to the end-user(s).

- The application must contain a copy of the Westcoast Energy Inc. (Westcoast) transportation agreement. If the gas does not flow through the Westcoast system but goes directly from a sales gas pipeline to the NOVA system, the application should include a copy of the NOVA firm transportation agreement. A transportation agreement may be submitted in draft, with a copy of the executed document forwarded within 30 days of ERC issuance.

- For sales requiring an exchange between Westcoast and NOVA, written documentation from the buyer(s) is required. This information is needed to demonstrate that the buyer(s) is aware of the exchange agreement.

(vii) **IDENTIFICATION OF DEDICATED LANDS AND RESERVES**

- The application must identify the sources and volumes of reserves contracted to the ERC applicant.

- The information should be submitted in the following format:

  (a) Legal

  - Location of spacing units using Dominion Land Survey or National Topographical System designation.
  - Ownership and working interest.
  - Lease number.
  - Stratigraphic rights held.

The above data should be presented in a tabular form and accompanied by maps for ease of reference.

(b) Reserves

(1) Existing wells (identified by well identification number and field name) on contracted lands and their status.
(2) Formations open to production in each well.
(3) Proven and probable reserves estimates along with back-up data.
(4) Date of commencement and termination of reserve commitments.
(5) Geological net pay maps supporting reserves estimates.
(6) Estimate of controlled remaining proven and probable reserves.
(7) Absolute Open Flow and deliverability estimates.

- Refer to Appendix 5 for detailed reserves data requirements.

- A copy of the supply contract(s) must be submitted. An abridged version of the supply contract(s) may be submitted provided it is duly signed and executed and contains all the required information on reserves and dedicated lands. The document(s) may be submitted in draft form, but submission of the executed document(s) will be specified as a condition in the ERC.

(viii) **COPY OF SALES CONTRACT**

- A sales contract must be submitted with the application. This document may be submitted in draft form with the provision of a copy of the executed version specified as a condition in the ERC. The requested volumes, term, price and removal point and the buyer/seller arrangement must be consistent with the sales contract.

- Where an ERC application covers more than one sales contract, all sales contracts must be submitted plus a summary sheet, identifying requested maximum daily and total term volumes, markets to be served, terms, removal points and prices.

(ix) **CONSTRUCTION OF FACILITIES, IF ANY, NEEDED TO UNDERTAKE REMOVAL**

- The application must identify any new gathering, processing or transportation facilities that must be constructed for the removal.

- If major facilities are required to undertake the removal, the applicant should contact the Director, Energy Project Analysis Branch (telephone number (604) 356-2154) and obtain information concerning Energy Project Certificate (EPC) requirements.

(x) **SUPPLEMENTARY INFORMATION REQUIRED BY THE MINISTER**

- The Minister may require that supplementary information be provided to clarify the application.

(xi) **APPLICATION FOR MODIFICATION OF AN ERC**

- The modification request must identify, describe and give reasons for any changes to the original application including term, volume, markets, supply, price, pricing formula and dedicated lands or reserves.

- For term modifications, the sum of the remaining term and the term of the requested extension may not exceed 15 years.

- The Minister may request additional information to clarify the modification application.

4.0 APPLICATION PROCEDURES, REVIEW AND APPROVAL

An original, signed application accompanied by supporting documents must be addressed to the Minister. However, the original application and six complete copies should be sent to the address below.

Director
Oil and Gas Policy Branch
Energy Resources Division
Ministry of Energy, Mines and Petroleum Resources
Room 401, 617 Government Street
Victoria, British Columbia
V8V 1X4

Telephone: (604) 387-6265
Fax: (604) 387-1339

Additional copies of an application may be requested.

(i) **CONFIDENTIALITY**

- All information is treated confidentially by the Ministry. If the public hearing option is used, an applicant will be advised and discussions initiated to determine what information is released for public scrutiny.

(ii) **APPLICATION REVIEW AND APPROVAL**

- Applications are reviewed for compliance with the items required under the Regulation and the natural gas removal policy.

- The applicant will be notified promptly of any information deficiency and will be required to supply the necessary information prior to approval. Modification requests are reviewed with attention to requested changes.

- The ERC will be issued by the Assistant Deputy Minister when the applicant meets all the requirements. A Pro Forma Long-term ERC is shown in Appendix 6.

5.0 REPORTING REQUIREMENTS

(i) **MONTHLY PERFORMANCE REPORTS**

- All ERC-holders must file a monthly report with the Ministry stating, for each ERC, the volume of natural gas removed from the Province in the previous month, the border and plant inlet prices (see Appendix 7), and facilities costs of service (gathering, processing and transportation).

- Filing of the monthly report will terminate when all previously reported data are obtained by the Ministry directly from computerized data bases.

- For monitoring purposes, a monthly Ministry market information bulletin of domestic and export average prices and volumes in various markets will be published to ensure competitive pricing prevails in all markets. Individual selling prices will remain confidential.

(ii) **EXECUTED DOCUMENTS**

- If required under the ERC, a copy of executed documents must be submitted within 30 days of issuance of the ERC or as specified in the Certificate.

(iii) **SUPPLY SOURCING CHANGES**

- An ERC-holder must apply for any changes in the supply source. If the gas supply is contracted with another producer, the revised contract must accompany the written request.

- Refer to section 3 (vii) for information requirements.

(iv) **NOTICE OF RESCISSION**

- If natural gas is removed under an ERC, the ERC is active until the term expires. If a sale collapses after deliveries have commenced, the ERC-holder should request that a Notice of Rescission be issued to terminate the ERC.

(v) **AUTOMATIC LAPSE OF ERC**

- There is a standard condition in all ERCs that if natural gas is not removed within 90 days of issuance, the ERC will automatically lapse and become null and void. The ERC-holder does not have to apply to have the ERC rescinded and the Ministry does not have to issue a Notice of Rescission.

6.0 MINISTRY CONTACTS

Further information is available on a daily basis by contacting the following:

Long-Term Removals: Senior Policy Advisor
Oil and Gas Policy Branch

Tel: (604) 356-2160
Fax: (604) 387-1339

APPENDIX 1

Draft B.C. Regulation

SCHEDULE

Application Requirements for the Removal of Natural Gas
Under Section 23
of the Utilities Commission Act

1. An application for the removal of natural gas under section 23 shall contain the following information:

A. Application for a Natural Gas Energy Removal Certificate
   (a) Applicant
      (i) applicant's name, address and nature of business;
      (ii) the name, title, and address of the person to be contacted respecting the application;
   (b) Natural Gas Removal
      (i) a description of the proposed removal identifying the quantity to be removed, the period over which the removal is to take place, the market or customers to be supplied, the price and the means of delivery;
      (ii) a copy of the sales, supply and transportation contracts, if applicable;
      (iii) identification of facilities, if any, required to be constructed to undertake the removal;
      (iv) identification of the source of supply and production;
      (v) explanation of whether the proposed removal is surplus to the applicant's supply commitments;
   (c) General
      (i) other information as required by the minister, including supplementary information to clarify information contained in the application;

B. Application for Modification of a Natural Gas Energy Removal Certificate
   (a) a description of the proposed modification and explanation of its purpose;
   (b) an assessment of the effects of the proposed modification in relation to the information contained in the original application;
   (c) other information as required by the minister, including supplementary information to clarify information contained in the application.

APPENDIX 1 (CONT'D)

22. (1) So as to ensure the efficient use of energy resources and to ensure that present and future requirements of the Province may be met, no person shall remove from the Province an energy resource produced, manufactured or generated within the Province, except in accordance with an energy removal certificate granted under this Part, but, subject to subsection (2), an energy removal certificate shall not be required

(a) where the removal is carried out in accordance with

(i) a contract made before this Act comes into force, or

(ii) a licence, permit or authorization issued for that purpose by the National Energy Board before this Act comes into force, or

(b) where the removal is exempted from this section by regulations, and for this purpose the regulations may create exemptions for different circumstances, and for different classes of an energy resource and be applicable to different classes of person.

(2) Where a contract, licence, permit or authorization is, after the date this subsection comes into force, renewed or extended, an exemption in respect of that contract, licence, permit or authorization, arising by the operation of subsection (1) (a), ceases.

(3) [Repealed 1982-54-8, proclaimed effective July 28, 1982.]

1980-60-22; 1982-54-8, proclaimed effective July 28, 1982.

Application for energy removal certificate

23. (1) An application for an energy removal certificate or for a modification of it shall be made to the minister and shall contain information the minister prescribes.

(2) The minister may, where

(a) application is made for an energy removal certificate, or

(b) he considers it desirable,

invite applications for energy removal certificates from other persons who may be similarly interested in removal of an energy resource from the Province, and may specify a time limit within which the applications must be made.

1980-60-23; 1982-54-9, proclaimed effective July 28, 1982.

Minister's disposition of application

24. (1) On receipt of an application under section 23 the minister may

(a) refer the application to the commission for a review,

(b) issue an energy removal certificate to the applicant, subject to conditions he considers to be in the public interest, or

(c) refuse to issue an energy removal certificate to the applicant.

(2) Where the minister refers an application to the commission, he may designate a commissioner or temporary commissioner to act as chairman for the purpose of the review.

1980-60-24; 1982-54-10, proclaimed effective July 28, 1982; 1985-52-94, effective July 26, 1985 (B.C. Reg. 243/85)

Review by commission and disposition of application

25. (1) Where an application for an energy removal certificate or for a modification of it is referred to the commission for a review, the commission shall hear the application in public hearing in accordance with terms of reference specified by the minister, and on conclusion of the hearing shall submit a report and recommendations to the Lieutenant Governor in Council.

(1.1) The terms of reference may include a requirement that the commission's hearings of specified applications be consolidated into one hearing.

(2) On receiving the report and recommendations of the commission, the Lieutenant Governor in Council may

(a) refuse to issue the energy removal certificate, or

(b) issue the energy removal certificate subject to conditions he considers to be in the public interest.

1980-60-25; 1982-54-11, proclaimed effective July 28, 1982.

APPENDIX 2

NATURAL GAS CONVERSION UNITS

A. CONVERSION FACTORS:

10^3M^3 = 35.301 MCF

1 MMCF = 28.327 10^3M^3

1 MMBTU = 1.054615 GJ (DRY)

B. CONVERSION EXAMPLES:

*ASSUME HEAT CONTENT OF 38.5 GJ/10^3M^3

MMBTU TO 10^3M^3: 15,000 MMBTU = $\frac{(15{,}000 * 1.054615)}{\text{HEAT CONTENT}}$

= (15,000 * 1.054615)/38.5

= 410.9 10^3M^3

MMCF TO 10^3M^3: 15 MMCF = 15,000 / 35.301

= 424.9 10^3M^3

C. PRICE CONVERSION EXAMPLES:

*ASSUME HEAT CONTENT OF 38.5 GJ/10^3M^3

$/$10^3M^3$ TO $/GJ: $77.00/$10^3M^3$ = $77.00 / HEAT CONTENT
= $77.00 / 38.5
= $2.00 / GJ

$/$10^3M^3$ TO $/GJ: $2.00/GJ = $2.00 * HEAT CONTENT
= $2.00 * 38.5
= $77.00 / 10^3M^3

$US/MMBTU TO $CDN/GJ:

$1.35 US/MMBTU = ($1.35 * EXCHANGE RATE) / 1.054615

$CDN/GJ TO $US/MMBTU:

$1.35 CDN/GJ = ($1.35 * 1.054615) / EXCHANGE RATE

NOTE: (1) USE THE HEAT CONTENT OF THE GAS TO BE REMOVED. EXCHANGE RATE IS BANK OF CANADA MONTHLY AVERAGE FOR PREVIOUS MONTH IN $CDN/$US.

(2) NOTATIONS:

CF = CUBIC FEET	M = THOUSAND
GJ = GIGAJOULE	MM = MILLION
BTU = BRITISH THERMAL UNIT	/ = DIVIDE
10^3M^3 = THOUSAND CUBIC METRES	* = MULTIPLY

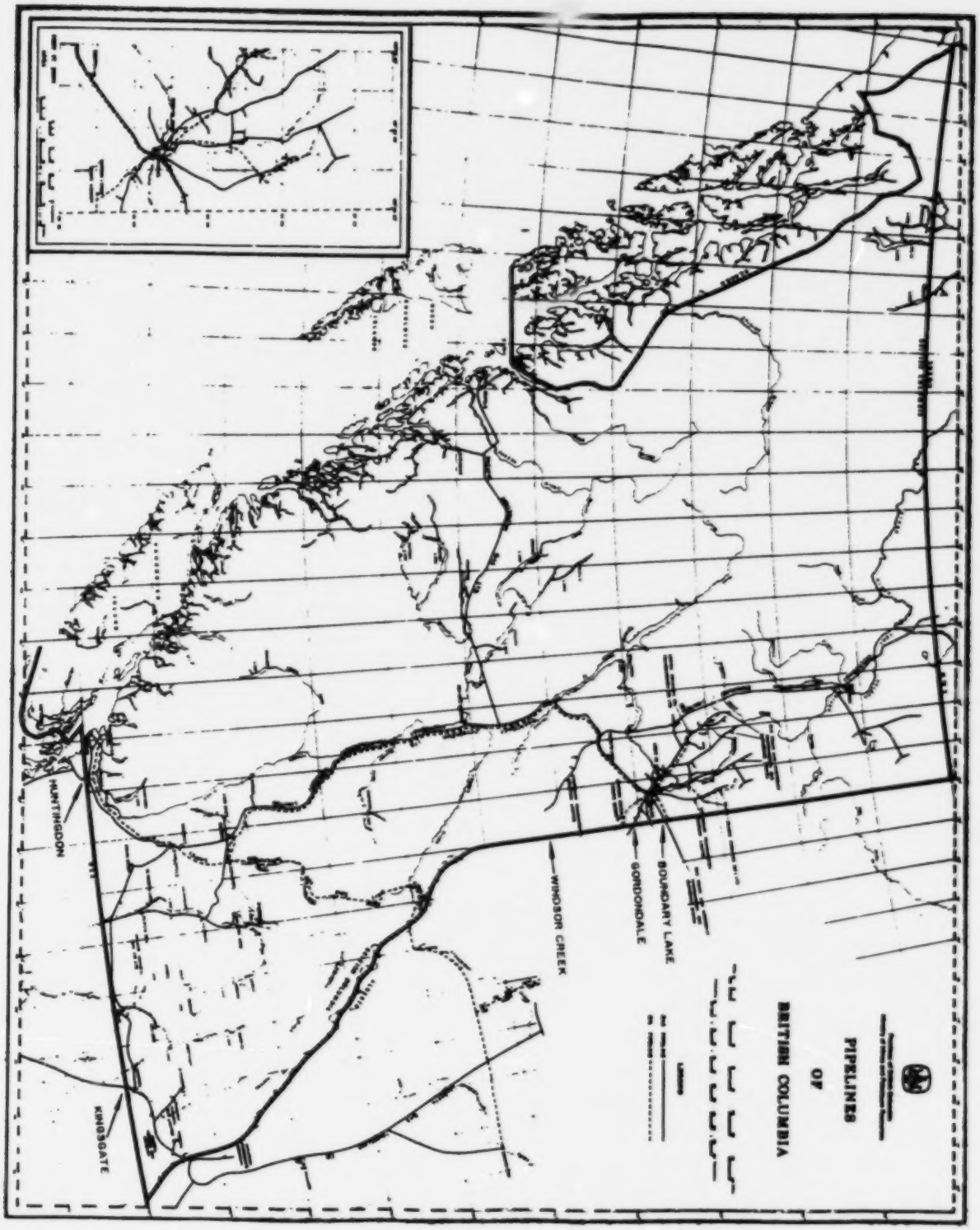
Appendix 3

United States Market Regions

CAL - California
MID - Midwest United States
NEU - Northeast United States
PNW - Pacific Northwest United States
RMT - Rocky Mountain
SEU - Southeast United States
SUS - Southern United States

Appendix 4

British Columbia Removal Points



Appendix 5

Detailed Reserves Data Requirements

DATE YR/MO/DAY | BC-NEB **GAS RESERVE DATA SHEET** GAS VOLUMES AT 101.325 kPa AND 15°C

SUBMITTED BY

FIELD | POOL

ZONE | MISC. I.D.

TYPE WELL (LOCATION) | TOP OF PAY | K.B | S.L. POOL MEAN FORMATION DEPTH | K.B | S.L. | TYPE OF RESERVE: ☐ ASSOCIATED ☐ NON-ASSOCIATED ☐ SOLUTION

BASE OF GAS PAY | K.B | S.L.

AVERAGE POROSITY SOURCE

CUTOFFS: POROSITY | SOURCE

PERMEABILITY | mD

GAS SATURATION (S_g) = 1-(S_w+S_o)

S_w | SOURCE

S_o | SOURCE

INITIAL RESERVOIR PRESSURE, P_i SOURCE

RESERVOIR TEMPERATURE SOURCE

Z P_r | SOURCE

T_r

GAS ANALYSIS P_c, kPa | T_c, K

P_c', kPa | T_c', K

RELATIVE DENSITY | SOURCE

RESERVOIR CONSTANT $(m^3/m^3) = \beta \times S_g \times \frac{P_i}{101.325} \times \frac{288.15}{T} \times \frac{1}{Z}$

RECOVERY FACTOR SOURCE

SURFACE LOSS FACTOR SOURCE

RAW GAS COMPOSITION IN MOLE FRACTIONS

N_2	CO_2	H_2S	H_2	He	C_1	C_2	C_3	iC_4	nC_4

C_5	C_6	C_{7+}

SOURCE

GROSS HEATING VALUE OF MARKETABLE GAS, MJ/m^3

SOURCE

$$STOIP,\ 10^3 m^3 = 10Ah\beta(1-Sw)\frac{1}{B_{oi}}$$

GOR SOURCE

$1/B_{oi}$ SOURCE

ADDITIONAL COMMENTS

EG-311(a1-83-01)

RESERVE ESTIMATE - INITIAL CONDITIONS

	PROVEN	PROBABLE
G/W, metres SL		
G/O, metres SL		
AREA, hectares		
h, metres		
ROCK VOLUME, $10^6 m^3$		
β, fraction		
GAS SAT, fraction		
P_i, kPa		
T, K		
Z		
RESERVOIR CONSTANT, m^3/m^3		
IGIP, $10^6 m^3$		
RECOVERY FACTOR, fraction		
PRODUCIBLE, $10^6 m^3$		
SURFACE LOSS FACTOR, fraction		
MARKETABLE, $10^6 m^3$		
INITIAL ESTABLISHED MARKETABLE, $10^6 m^3$		
MARKETABLE GAS PRODUCED, $10^6 m^3$		
REMAINING ESTABLISHED MARKETABLE, $10^6 m^3$		
REMAINING ESTABLISHED MARKETABLE UNDER CONTRACT, $10^6 m^3$		
EFFECTIVE DATE, YR/MO/DAY		

SOLUTION GAS

STOIP, $10^3 m^3$	
GOR, m^3/m^3	
GIP, $10^6 m^3$	
RECOVERY FACTOR, fraction	
PRODUCIBLE, $10^6 m^3$	
SURFACE LOSS FACTOR, fraction	
MARKETABLE, $10^6 m^3$	
MARKETABLE GAS PRODUCED, $10^6 m^3$	
REMAINING ESTABLISHED MARKETABLE, $10^6 m^3$	
EFFECTIVE DATE YR/MO/DAY	

STOIP = STOCK TANK OIL IN PLACE
GOR = INITIAL DISSOLVED GAS-OIL RATIO

APPENDIX 6

**Pro-Forma Energy Removal Certificate (ERC)
for Long-Term Removal**

**IN THE MATTER OF
THE UTILITIES COMMISSION ACT
S.B.C., 1980, C. 60
(the Act)**

and

**IN THE MATTER OF AN APPLICATION (the Application)
FOR AN ENERGY REMOVAL CERTIFICATE
BY (the Applicant)
AUTHORIZING THE REMOVAL OF AN ENERGY RESOURCE
FROM BRITISH COLUMBIA (the Province)**

ENERGY REMOVAL CERTIFICATE -

WHEREAS, the Applicant applied, in conformity with the requirements of British Columbia Regulation 389/80, to the Minister of Energy, Mines and Petroleum Resources (the Minister) on the ____ day of ____, 19__, for an Energy Removal Certificate for the removal of natural gas from the Province to _(location)_ for sale to _____ (the Buyer), pursuant to the executed Long-Term Gas Purchase Agreement dated the ____ day of _____, 19__, between the Applicant and the Buyer, and submitted as part of the Application (the Agreement);

and

WHEREAS, the Minister is satisfied that the volumes of British Columbia natural gas applied for by the Applicant will be surplus to the Province's domestic and existing export requirements;

NOW THEREFORE, the Minister hereby issues to the Applicant, pursuant to Part 2 of the Act, this Energy Removal Certificate, authorizing the removal from the Province to the Buyer, on a firm basis, subject to the following conditions:

1) The Term of this Certificate shall be __ years commencing on the ____ day of _____, 19__, and terminating on the ____ day of _____, 19__;

2) The maximum volumes of British Columbia natural gas to be removed by the Applicant during the Term, pursuant to this Certificate shall not exceed:

_____ cubic metres per day;

_____ cubic metres in any consecutive twelve-month period ending on the ____ day of _____ during the period; and

_____ cubic metres in total;

measured at a 101.325 kilopascal pressure base and at a 15 degree Celsius temperature base;

3) The Applicant pursuant to this Certificate shall remove the said natural gas from the Province at the removal point(s) near _____, British Columbia, or at any other such removal point(s) as, upon application by the Applicant, is approved by the Minister;

4) The Applicant shall not remove British Columbia natural gas pursuant to this Certificate for sale to the Buyer under contractual arrangements different from those described in the Application;

5) The Applicant shall ensure that an Acquisition Order under the Natural Gas Price Act S.B.C., 1985, c. 53, has been obtained for the British Columbia natural gas removed hereunder;

6) The Applicant shall provide to the Minister, on or before a specified date with:

a) a copy of the executed natural gas purchase agreements for the supply of the British Columbia natural gas removed hereunder, and thereafter all subsequent amendments and changes to that agreement;

b) a copy of the executed natural gas sales agreement for the sale of British Columbia natural gas removed hereunder, and thereafter all subsequent amendments and changes to that agreement;

c) a copy of the executed transportation agreement between the Applicant and (Nova or Westcoast) for British Columbia natural gas removed hereunder, and thereafter all subsequent amendments and changes to that agreement;

d) notice of any change to the proposed source of supply of the British Columbia natural gas, from that anticipated in the Application, prior to the delivery of such natural gas to the Buyer, and , if such British Columbia natural gas is acquired by the Applicant for the removal approved hereunder, a copy of that subsequent executed natural gas supply contract and all subsequent amendments and changes to that contract;

e) on or before _____ of each year, the price, for the coming contract year which the Buyer agrees to pay the Applicant for the British Columbia natural gas to be removed under this Certificate for the period of _____, 19__, to _____, 19__;

f) by the last day of each calendar month during the Term, in respect of the immediate preceding month, the total volume of British Columbia natural gas removed from the Province pursuant to this Certificate, the price of the residue natural gas sold at the export point, the facilities costs (gathering, processing and transportation), and the plant inlet price;

g) prior to execution, all amendments or changes to the transportation agreement with respect to the British Columbia natural gas removed pursuant to this Certificate; and

h) prior to execution, all amendments or changes to the Gas Purchase Agreement, or amendments or changes to the documents comprising the Application;

7) Should an event occur, that in the determination of the Minister will result in a shortage of supply of British Columbia natural gas to residential, commercial or firm industrial consumers within the Province, the Minister may direct the Applicant to temporarily divert, for no longer duration than the aforementioned shortfall, any of the British Columbia natural gas to be removed pursuant to this Certificate, such diversion to be to the said residential, commercial or firm industrial consumers within the Province and such diversion to be on a pro rata basis of maximum daily volume obligations for all removal of British Columbia natural gas from the Province;

8) The Applicant shall ensure that contracted reserves under this Certificate are not committed under existing or subsequent certificates; and

9) This Certificate may be rescinded at the discretion of the Minister if, in the Minister's opinion:

   a) the Gas Purchase Agreement is no longer in force or has been revised or amended without approval of the Minister, or

   b) the Applicant disposes of this Certificate or any right or duty hereunder in part or in whole, without the consent of the Minister, such consent not to be unreasonably withheld, or

   c) the Applicant commits a breach of any of the Conditions to be performed or observed on its part pursuant to this Certificate and fails to perform or observe the same within 30 days after written notice of the nature of the non-compliance is given to the Applicant by the Minister.

John Allan
Assistant Deputy Minister
Energy Resources Division

Dated for reference this _____ day of _____, 19__.
ERC _____

The aforementioned Conditions
are agreed to by the Applicant
this ____ day of _____, 19__.

The Common Seal of the Applicant,

was hereunto affixed in the
presence of:

APPENDIX 7

BRITISH COLUMBIA MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

MONTHLY REPORT ON REMOVAL OF NATURAL GAS

MONTH	
COMPANY	
ERC #	
AO #	
B.C. BORDER REMOVAL POINT	
BUYER	
TYPE OF SALE (firm or interruptible)	
VOLUME IN 10^3M^3	
QUANTITY IN GJ	
PRICE AT B.C. BORDER COST OF SERVICE (Gathering, Processing and Transportation) PLANT INLET PRICE	

SCHEDULE 2

GUIDELINES FOR AN APPLICATION FOR THE SHORT-TERM REMOVAL OF NATURAL GAS FROM THE PROVINCE OF BRITISH COLUMBIA

1.0 INTRODUCTION

An Energy Removal Certificate (ERC) is required before an energy resource can be removed from British Columbia (B.C.). These Guidelines provide information on the procedures to be followed to obtain an ERC for natural gas removals. The sections are organized as follows:

Section 2.0 Legislative Requirements
Section 3.0 Application Information Requirements
Section 4.0 Application Procedures, Review and Approval
Section 5.0 Reporting Requirements
Section 6.0 Ministry Contacts

2.0 LEGISLATIVE REQUIREMENTS

Part 2 of the Utilities Commission Act (the Act) provides the Minister of Energy, Mines and Petroleum Resources (the Minister) with the authority to issue ERCs, subject to conditions he considers to be in the public interest. Under Section 22 of the Act, an ERC is required before an energy resource can be removed from the Province. The person who owns the natural gas as it leaves the Province must apply for and obtain an ERC before removing natural gas.

Under Section 23, an application for an ERC or modification to an existing ERC, must be made to the Minister and contain the information prescribed in a proposed Regulation (the Regulation). See Appendix 1 for the draft Regulation and relevant sections of the Act.

Section 24 (1)(b) enables the Minister to issue an ERC, subject to conditions he considers to be in the public interest. The Minister may, under Section 24 (1)(c), refuse to issue an ERC.

A public hearing option exists under Sections 24 (1)(a), where the Minister may refer an application, or modification request, to the B.C. Utilities Commission (the Commission) for a public review using terms of reference issued by the Minister. If the public hearing option is used, the Lieutenant-Governor-in-Council (the Cabinet), upon receipt of the Commission's report and recommendations, may refuse to issue the ERC or may issue the ERC subject to public interest conditions.

3.0 APPLICATION INFORMATION REQUIREMENTS

The information contained in an application to remove natural gas from the Province should conform to the requirements specified in the Regulation.

APPLICANT

(i) **APPLICANT'S NAME, ADDRESS AND BUSINESS**

- The applicant must be the owner of the natural gas as it leaves the Province and a legitimate company involved in the natural gas industry, e.g., producer, aggregator or broker.

- The applicant must be signatory to the submitted sales contract and supply contract(s).

- The application must state the applicant's legal company name and current address with phone and fax numbers.

(ii) **NAME, TITLE AND ADDRESS OF CONTACT RESPECTING THE APPLICATION**

- The applicant's contact person must be identified by name, title and address with phone and fax numbers.

ENERGY REMOVAL DESCRIPTION

(i) **QUANTITY AND TYPE OF REMOVAL**

- The application must state that the removal is for natural gas and specify the maximum daily volume and total term volumes in gigajoules (GJ) and cubic metres. Appendix 2 contains conversion calculations.

- Requested removal volumes must be supported by sales contract volumes and, where applicable, by supply contract volumes. Only contracted volumes will be approved in an ERC.

- The application must specify whether a firm or interruptible ERC is being requested. Applications must specify firm or interruptible transportation arrangements and, if firm, the expected load factor.

- Any removals of raw natural gas which require processing outside of British Columbia must specify raw and residue volumes. For example, for removals of raw natural gas at the British Columbia/Alberta border to an Alberta processing plant, the ERC-applicant must state the volumes of raw natural gas to be removed from British Columbia and the volumes of residue gas to be sold at the plant outlet.

(ii) **PERIOD (TERM)**

- The requested term must be equal to the lesser of the term of the sales contract and the term of the supply contract(s), subject to a maximum of two years.

(iii) **MARKET AND CUSTOMERS**

- The application must specify who the buyer of the natural gas is at the removal or delivery point.

- The application must also describe, by market region and type of end-user, who will ultimately consume the removed natural gas.

- Market regions are designated by Canadian provinces and United States regions as defined by the Federal/Provincial Monitoring Committee (see Appendix 3). If natural gas is going to more than one market region, the application should indicate the anticipated proportion of the maximum daily volume going to each market.

(iv) **PRICE**

- For monitoring purposes, the application must specify the sales contract price in $CDN/GJ and $US/MMbtu at the British Columbia removal point (see Appendix 4) and the pricing formula used to arrive at the contract price.

- The application must also provide information on the producer netback price at the plant inlet in $CDN/GJ.

(v) **ACQUISITION ORDER**

- An Acquisition Order (AO) is required before natural gas can be removed from British Columbia. The AO is issued by the British Columbia Petroleum Corporation (BCPC) to the producer at the point of first sale.

(vi) **MEANS OF DELIVERY**

- The application must specify how the natural gas will be delivered to the removal point and to the end-user(s).

- Firm application must contain a copy of the Westcoast Energy Inc. (Westcoast) firm transportation agreement. If the gas does not flow through the Westcoast system but goes directly from a sales gas pipeline to the NOVA system, the application should include a copy of the NOVA firm transportation agreement. The transportation agreement may be submitted in draft, with a copy of the executed document forwarded within 30 days of ERC issuance.

- For sales requiring an exchange between Westcoast and NOVA, written documentation from the buyer(s) is required. This information is needed to demonstrate that the buyer(s) is aware of the exchange agreement.

(vii) **SUPPLY SOURCING**

- The applicant must identify all well locations and field names by producing company.

(viii) **COPY OF SALES CONTRACT**

- A sales contract must be submitted with the application. This document may be submitted in draft form, but submission of an executed copy of the document will be specified as a condition in the ERC. The requested volumes, term, price and removal point and the buyer/seller arrangement must be consistent with the sales contract.

- Where an ERC application covers more than one sales contract, all sales contracts must be submitted plus a summary sheet, identifying requested maximum daily and total term volumes, markets to be served, terms, removal points and prices.

(ix) **CONSTRUCTION OF FACILITIES, IF ANY, NEEDED TO UNDERTAKE REMOVAL**

- The application must identify any new gathering, processing or transportation facilities that must be constructed for the removal.

- If major facilities are required to undertake the removal, the applicant should contact the Director, Energy Project Analysis Branch (telephone number (604) 356-2154) and obtain information concerning Energy Project Certificate (EPC) requirements.

(x) **SUPPLEMENTARY INFORMATION REQUIRED BY THE MINISTER**

- The Minister may require that supplementary information be provided to clarify the application.

(xi) **APPLICATION FOR MODIFICATION OF AN ERC**

- The modification request must identify, describe and give reasons for any changes to the original application including term, volume, markets, supply and price.

- The Minister may request additional information to clarify the modification application.

4.0 APPLICATION PROCEDURES, REVIEW AND APPROVAL

An original, signed application accompanied by supporting documents must be addressed to the Minister. However, the original application should be sent to the address below.

Director
Oil and Gas Policy Branch
Energy Resources Division
Ministry of Energy, Mines and Petroleum Resources
Room 401, 617 Government Street
Victoria, British Columbia
V8V 1X4

Telephone: (604) 387-6265
Fax: (604) 387-1339

Additional copies of an application may be requested.

(i) CONFIDENTIALITY

- All information is treated confidentially by the Ministry. If a public hearing option is to be used, an applicant would be advised of this procedure and discussions would be initiated to determine what information would be released for public scrutiny.

(ii) APPLICATION REVIEW AND APPROVAL

- Applications are reviewed for compliance with the items required under the Regulation and natural gas removal policy.

- The applicant will be notified promptly of any information deficiency and will be required to supply the necessary information prior to approval. Modification requests are reviewed with attention to requested changes.

- The ERC will be issued by the Assistant Deputy Minister when the applicant meets all the requirements. A Pro-Forma Short Term ERC is shown in Appendix 5.

5.0 REPORTING REQUIREMENTS

(i) MONTHLY PERFORMANCE REPORTS

- All ERC-holders must file a monthly report with the Ministry stating, for each ERC, the volume of natural gas removed from the Province in the previous month, the border and plant inlet prices, (see Appendix 6), and facilities costs of service (gathering, processing and transportation).

- Filing of the monthly report will terminate when all previously reported data are obtained by the Ministry directly from computerized data bases.

- For monitoring purposes, a monthly Ministry market information bulletin of domestic and export average prices and volumes in various markets will be published to ensure competitive pricing prevails in all markets. Individual selling prices will remain confidential.

(ii) EXECUTED DOCUMENTS

- If required under the ERC, a copy of executed documents must be submitted within 30 days of issuance of the ERC or as specified in the Certificate.

(iii) SUPPLY SOURCING CHANGES

- An ERC-holder must apply for any changes in the supply source. If the gas supply is contracted with another producer, the revised contract must accompany the written request.

- Refer to section 3 (vii) for information requirements.

(iv) NOTICE OF RESCISSION

- If natural gas is removed under an ERC, the ERC is active until the term expires. If a sale collapses after deliveries have commenced, the ERC-holder should request that a Notice of Rescission be issued to terminate the ERC.

(v) **AUTOMATIC LAPSE OF ERC**

- There is a standard condition in all ERCs that if natural gas is not removed within 90 days of issuance, the ERC will automatically lapse and become null and void. The ERC-holder does not have to apply to have the ERC rescinded and the Ministry does not have to issue a Notice of Rescission.

6.0 MINISTRY CONTACTS

Further information is available on a daily basis by contacting the following:

Senior Policy Advisor
Oil and Gas Policy Branch

Tel: (604) 356-2160
Fax: (604) 387-1339

APPENDIX 1

Draft B.C. Regulation

SCHEDULE

Application Requirements for the Removal of Natural Gas
Under Section 23
of the Utilities Commission Act

1. An application for the removal of natural gas under section 23 shall contain the following information:

A. Application for a Natural Gas Energy Removal Certificate
   (a) Applicant
      (i) applicant's name, address and nature of business;
      (ii) the name, title, and address of the person to be contacted respecting the application;
   (b) Natural Gas Removal
      (i) a description of the proposed removal identifying the quantity to be removed, the period over which the removal is to take place, the market or customers to be supplied, the price and the means of delivery;
      (ii) a copy of the sales, supply and transportation contracts, if applicable;
      (iii) identification of facilities, if any, required to be constructed to undertake the removal;
      (iv) identification of the source of supply and production;
      (v) explanation of whether the proposed removal is surplus to the applicant's supply commitments;
   (c) General
      (i) other information as required by the minister, including supplementary information to clarify information contained in the application;

B. Application for Modification of a Natural Gas Energy Removal Certificate
   (a) a description of the proposed modification and explanation of its purpose;
   (b) an assessment of the effects of the proposed modification in relation to the information contained in the original application;
   (c) other information as required by the minister, including supplementary information to clarify information contained in the application.

22. (1) So as to ensure the efficient use of energy resources and to ensure that present and future requirements of the Province may be met, no person shall remove from the Province an energy resource produced, manufactured or generated within the Province, except in accordance with an energy removal certificate granted under this Part, but, subject to subsection (2), an energy removal certificate shall not be required

(a) where the removal is carried out in accordance with

(i) a contract made before this Act comes into force, or

(ii) a licence, permit or authorization issued for that purpose by the National Energy Board before this Act comes into force, or

(b) where the removal is exempted from this section by regulations, and for this purpose the regulations may create exemptions for different circumstances, and for different classes of an energy resource and be applicable to different classes of person.

(2) Where a contract, licence, permit or authorization is, after the date this subsection comes into force, renewed or extended, an exemption in respect of that contract, licence, permit or authorization, arising by the operation of subsection (1) (a), ceases.

(3) [Repealed 1982-54-8, proclaimed effective July 28, 1982.]

1980-60-22; 1982-54-8, proclaimed effective July 28, 1982.

Application for energy removal certificate

23. (1) An application for an energy removal certificate or for a modification of it shall be made to the minister and shall contain information the minister prescribes.

(2) The minister may, where

(a) application is made for an energy removal certificate, or

(b) he considers it desirable,

invite applications for energy removal certificates from other persons who may be similarly interested in removal of an energy resource from the Province, and may specify a time limit within which the applications must be made.

1980-60-23; 1982-54-9, proclaimed effective July 28, 1982.

Minister's disposition of application

24. (1) On receipt of an application under section 23 the minister may

(a) refer the application to the commission for a review,

(b) issue an energy removal certificate to the applicant, subject to conditions he considers to be in the public interest, or

(c) refuse to issue an energy removal certificate to the applicant.

(2) Where the minister refers an application to the commission, he may designate a commissioner or temporary commissioner to act as chairman for the purpose of the review.

1980-60-24; 1982-54-10, proclaimed effective July 28, 1982; 1985-52-94, effective July 26, 1985 (B.C. Reg. 243/85).

Review by commission and disposition of application

25. (1) Where an application for an energy removal certificate or for a modification of it is referred to the commission for a review, the commission shall hear the application in public hearing in accordance with terms of reference specified by the minister, and on conclusion of the hearing shall submit a report and recommendations to the Lieutenant Governor in Council.

(1.1) The terms of reference may include a requirement that the commission's hearings of specified applications be consolidated into one hearing.

(2) On receiving the report and recommendations of the commission, the Lieutenant Governor in Council may

(a) refuse to issue the energy removal certificate, or

(b) issue the energy removal certificate subject to conditions he considers to be in the public interest.

1980-60-25; 1982-54-11, proclaimed effective July 28, 1982.

APPENDIX 2

NATURAL GAS CONVERSION UNITS

A. CONVERSION FACTORS:

10^3M^3 = 35.301 MCF

1 MMCF = 28.327 10^3M^3

1 MMBTU = 1.054615 GJ (DRY)

B. CONVERSION EXAMPLES:
*ASSUME HEAT CONTENT OF 38.5 GJ/10^3M^3

MMBTU TO 10^3M^3: 15,000 MMBTU = $\frac{(15{,}000 * 1.054615)}{\text{HEAT CONTENT}}$

= (15,000 * 1.054615)/38.5

= 410.9 10^3M^3

MMCF TO 10^3M^3: 15 MMCF = 15,000 / 35.301

= 424.9 10^3M^3

C. PRICE CONVERSION EXAMPLES:
*ASSUME HEAT CONTENT OF 38.5 GJ/10^3M^3

$/$10^3M^3$ TO $/GJ: $77.00/$10^3M^3$ = $77.00 / HEAT CONTENT
= $77.00 / 38.5
= $2.00 / GJ

$/$10^3M^3$ TO $/GJ: $2.00/GJ = $2.00 * HEAT CONTENT
= $2.00 * 38.5
= $77.00 / 10^3M^3

$US/MMBTU TO $CDN/GJ:

$1.35 US/MMBTU = ($1.35 * EXCHANGE RATE) / 1.054615

$CDN/GJ TO $US/MMBTU:

$1.35 CDN/GJ = ($1.35 * 1.054615) / EXCHANGE RATE

NOTE: (1) USE THE HEAT CONTENT OF THE GAS TO BE REMOVED. EXCHANGE RATE IS BANK OF CANADA MONTHLY AVERAGE FOR PREVIOUS MONTH IN $CDN/$US.

(2) NOTATIONS:

CF = CUBIC FEET	M = THOUSAND
GJ = GIGAJOULE	MM = MILLION
BTU = BRITISH THERMAL UNIT	/ = DIVIDE
10^3M^3 = THOUSAND CUBIC METRES	* = MULTIPLY

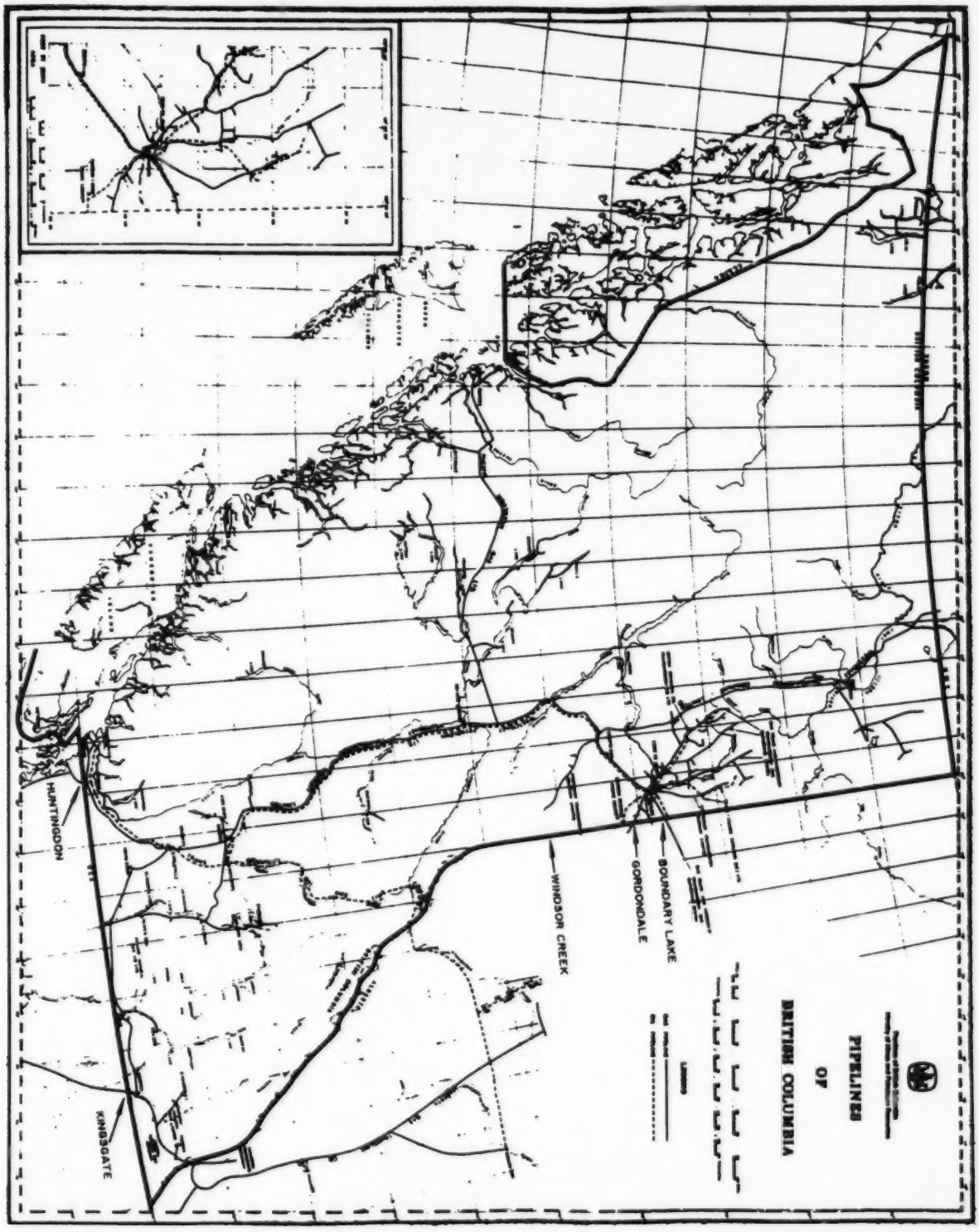
Appendix 3

United States Market Regions

CAL - California
MID - Midwest United States
NEU - Northeast United States
PNW - Pacific Northwest United States
RMT - Rocky Mountain
SEU - Southeast United States
SUS - Southern United States

Appendix 4

British Columbia Removal Points



APPENDIX 5

Pro-Forma Energy Removal Certificate (ERC)
for Short-Term, Interruptible Removal

IN THE MATTER OF
THE UTILITIES COMMISSION ACT
S.B.C., 1980, c. 60
(the Act)

and

IN THE MATTER OF AN
APPLICATION FOR AN ENERGY REMOVAL CERTIFICATE
BY (the Applicant)
FOR THE REMOVAL OF AN ENERGY RESOURCE
FROM BRITISH COLUMBIA (the Province)

(identifies seller as applicant)

(ERC #)

ENERGY REMOVAL CERTIFICATE -

(identifies Buyer)

WHEREAS, the Applicant made application (the Application), pursuant to the requirements of British Columbia Regulation 389/80, to the Minister of Energy, Mines and Petroleum Resources (the Minister), on (date) , 1989, for an Energy Removal Certificate for the removal of natural gas from the Province to (location) for sale to . (the Buyer);

(type of Sale)

NOW THEREFORE, the Minister hereby issues to the Applicant, pursuant to Part 2 of the Act, this Certificate authorizing the removal of British Columbia natural gas from the Province to the Buyer, on an interruptible or best efforts basis, subject to the following Conditions:

(maximum 2 year term)

1. this removal is authorized for a Term commencing on (date) , 1989, and terminating on (date) ;

(maximum daily & total volume)

2. the volumes of British Columbia natural gas to be removed by the Applicant during the Term, pursuant to this Certificate, shall not exceed thousand cubic metres per day, and million cubic metres in total, measured at a 101.325 kilopascal pressure base and at a 15 degree Celsius temperature base;

(removal point)

3. the Applicant shall remove the said natural gas from the Province at the removal point(s) , or at such other removal point as, upon application by the Applicant, is approved by the Minister;

(price test) (valid to Oct. 31,1990)

4. the Applicant shall not dispose of the British Columbia natural gas removed hereunder for a price less than the price charged to British Columbians for similar types of service in the area or zone in British Columbia adjacent to the point of removal;

.../2

(application documents - changes subject to approval)

5. the Applicant shall not remove British Columbia natural gas pursuant to this Certificate for sale to the Buyer under contractual arrangements different from those described in the Application;

(Acquisition Order requirement)

6. the Applicant shall ensure that an Acquisition Order under the Natural Gas Price Act R.S.B.C., 1985, c. 53, has been obtained for the British Columbia natural gas removed hereunder;

7. the Applicant shall provide to the Minister, on or before (date) , with

(executed sales/supply transportation contracts due within 30 days of ERC issuance)

a) a copy of the executed natural gas purchase agreements for the supply of the British Columbia natural gas removed hereunder, and thereafter all subsequent amendments and changes to those agreements,

b) a copy of the executed natural gas sales agreement for the sale of the British Columbia natural gas removed hereunder, and thereafter all subsequent amendments and changes to that agreement, and

c) a copy of the executed agency agreement for the transportation of British Columbia natural gas to be removed hereunder, and thereafter all subsequent amendments and changes to that agreement;

(reporting requirement: monthly spot bid) (Valid until Oct. 31, 1990)

8. the Applicant shall provide to the Minister, on or before the third last working day of each month, of the price for the next month which the Buyer agrees to pay the Applicant for the natural gas to be delivered under this Certificate;

(reporting requirement: monthly price and volume) Columbia (valid until Oct 31, 1990)

9. the Applicant shall provide to the Minister, by the last day of each calendar month during the Term, in respect of the immediate preceding month, the total volume and the average border and plant inlet price of the British natural gas removed from the Province pursuant to this Certificate;

"use it or lose it")

10. this Certificate ceases to be of any effect, and shall terminate 90 days following the date of issuance of this Certificate, if the Applicant by such date has not commenced deliveries of British Columbia natural gas to the Buyer, unless the Applicant, in accordance with the Regulations, makes an application for a modification of this Condition, and the Minister issues the same;

.../3

(rescission) 11. this Certificate may be rescinded at the discretion of the Minister if requested by the Applicant or for failure by the Applicant to comply with any of the Conditions hereof.

John Allan
Assistant Deputy Minister
Energy Resources Division

Dated for reference this day of , 1989
ERC- ( )

APPENDIX 6

BRITISH COLUMBIA MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

MONTHLY REPORT ON REMOVAL OF NATURAL GAS

MONTH	
COMPANY	
ERC #	
AO #	
B.C. BORDER REMOVAL POINT	
BUYER	
TYPE OF SALE (firm or interruptible)	
VOLUME IN 10^3M^3	
QUANTITY IN GJ	
PRICE AT B.C. BORDER COST OF SERVICE (Gathering, Processing and Transportation) PLANT INLET PRICE	